299804

Arizona Department of Transportation

Intermodal Transportation Division

206 South Seventeenth Avenue Phoenix, Arizona 85007-3213

ADOT

Janet Napolitano
Governor

Victor M. Mendez
Director

Michael J. Ortega
State Engineer

October 12, 2004

U.S Department of Transportation
Docket Management Facility, Room PL-401
400 Seventh Street, S.W.
Washington, DC 20590-0001

RE: Comments on Procedure to Predict Highway Traffic Noise
Docket Number: FHWA-2004-18309 - 7

Dear Sir or Madam:

Thank you for the opportunity to comment on the FHWA Traffic Noise Model 2.5 (TNM). Arizona will implement the TNM 2.5 methodology this October and thus has no data to compare to the STAMINA/OPTIMA noise model methodology, so we will not comment on the practical effects of the change in methodology. However, we do have one comment.

The Arizona Department of Transportation (ADOT) has equipment that can measure tire to pavement noise and based on field measurements we have found that some pavement types are louder than others. This has been problematic because the STAMINA/OPTIMA noise model required the incorporation of noise emission levels from a one-size-fits-all theoretical composite pavement rather than data for the actual pavement type used. Our measurements indicate this composite pavement is about 4 decibels quieter than the tined Portland cement concrete pavement that is typically used in Arizona. We believe the required use of the composite pavement noise emission levels has caused the model to underestimate the traffic noise (in Arizona) and thereby underestimate the noise wall heights. As a result, ADOT has had to raise existing noise walls, which costs more than constructing them to the correct height in the first place.

The new TNM 2.5 methodology could help alleviate this problem because it has the capability of incorporating noise emission levels from three additional pavement types (Portland cement concrete, open graded asphaltic concrete & dense-graded asphaltic concrete) into the model to assess traffic noise and design mitigation. However, it is our understanding that FHWA will not allow the use of this new capability and will continue to require the sole use of the composite pavement noise emission levels for modeling purposes. ADOT would like to be able to use any of the four pavement type noise emission levels in the model because we believe this flexibility will result in more accurate noise wall design.

Thank you, again, for consideration of this comment and for allowing ADOT the opportunity to review this noise model. If you have any questions, or need further information, please contact Mike Dennis at 602-712-7114 or Fred Garcia at 602-712-8635.

Sincerely,

Michael J. Ortega, P.E.
State Engineer

Arizona Governor's Award for Quality
2001 Award Recipient